REMARKS

Claims 1 and 4-13 are pending in the application. Claims 2-3 are canceled. Claims 1 and 4-13 are amended. The specification is amended to correct minor typographical errors. No new matter is added.

Claim rejections – 35 USC 102

The rejection of claims 1-13 under 35 U.S.C. 102(b) as being anticipated by Ziegler et al. (U.S. Patent No. 5,901,027), hereinafter Ziegler is traversed.

In one embodiment of our invention, FIG. 20 shows a ground fault circuit interrupter (GFCI) having a circuit interrupting portion, a reset portion and a reset lockout potion where the GFCI is coupled to an MOV 100. The MOV has a thermal fusible layer capable of conducting current and adapted to form a high impedance path by separating, at least partially, or cracking, or sputtering, or melting, from the surface of the MOV when the temperature of the MOV exceeds a predetermined temperature to form a spark gap electrically connected in series with the MOV to help dissipate voltage surges. For example, in one embodiment, FIGS. 1-6 show an MOV 12 having a layer of thermally sensitive and electrically conductive material 16 on one face 14 of the MOV 12. When the MOV is subjected to one or more high voltage surges, which can destroy the MOV, the material 16 will separate from the MOV but still stay intact to form a high impedance path in the form of a spark gap. When this occurs, the material 16 forms an arc path that transforms the MOV into an MOV in series with a high impedance path which is a spark gap which "keeps the MOV in the circuit during the over voltage surge to provide

protection to the load and, at the same time, protect the MOV from excessive heating which could cause it to fracture and explode" (See page 7, lines 1-3 of the present specification).

Amended claim 1 clearly avoids Ziegler by reciting a protection device that includes the structure of a GFCI in combination with an MOV having a thermal fusible layer capable of conducting current and adapted to form a high impedance path by separating, at least partially, or cracking, or sputtering, or melting from the surface of the MOV when the temperature of the MOV exceeds a predetermined temperature to form a spark gap electrically connected in series with the MOV to help dissipate voltage surges.

Referring to the Examiner's comment about claim 1, Figs. 1-6 of Ziegler show a layer 16, MOV element 12 and first and second conductors 22, 24. The layer 16 opens when subjected to excessive heating which causes the current flow through the MOV to be interrupted and the MOV to be electrically disconnected from the circuitry because there is no longer an electrical path through the MOV (See column 4, lines 6-12). In contrast, in our invention, the thermal fusible layer separates from the MOV to form a high impedance path in the form of a spark gap which keeps the MOV electrically connected during the over voltage surge to protect the MOV from excessive heating which could cause it to fracture and explode. Moreover, Ziegler does not disclose using an MOV with a GFCI much less a GFCI having a structure that includes a circuit interrupting portion, a reset portion and a reset lockout potion as we recite in our claim. In addition, the gap 110 mentioned in Ziegler (FIG. 6) refers to a gap to permit run-off of fusible material and any gases, produced when the thermal fusible material melts, to escape. Such a gap is not the same as a spark gap as in our invention.

Amended claim 1 clearly avoids the Ziegler reference by reciting protection device that includes a "GFCI ... and an MOV having .... a thermal fusible layer capable of conducting current and adapted to form a high impedance path by separating, at least partially, or cracking, or sputtering, or melting from the surface of the MOV when the temperature of the MOV exceeds a predetermined temperature to form a spark gap electrically connected in series with the MOV to help dissipate voltage surges." Claims 4-9 depend in varying scope from claim 1 and, therefore, also avoid the Ziegler reference.

Claim 10 is amended to be more narrow in scope than claim 1. As discussed above, the spark gap maintains an electrical connection through the MOV and prevents damage to the MOV and the GFCI. This limitation is not disclosed in the Ziegler reference. Dependent claims 11-13 depend from claim 10 and, therefore, also avoid the Ziegler reference.

Claim rejections – 35 USC 102

The rejection of claims 1-2 and 4 under 35 U.S.C. 102(b) as being anticipated by McLoughlin et al. (2001/0055187), hereinafter McLoughlin is traversed.

Referring to the Examiner's comment about claim 1, Fig. 1 of McLoughlin shows varistor 1 which includes a zinc oxide disc 2 for over-voltage protection. Lead 3 is connected to electrode 4 on one side of the disc 2, and lead 5 is connected to electrode 6 on the other side via a thermal fuse 7. The fuse 7 provides integrated thermal protection which electrically disconnects the varistor 1 from a circuit in the event of overheating due to sustained over-voltages. See McLoughlin, page 2, paragraph 32:

"The fuse 7 operates by the solder fillets 11 and 14, the link 10, and the hot melt 12 becoming molten due to sustained abnormal over-voltages ... The insulative properties of the hot melt 12 ensure a very effective and substantial insulation gap between the lead 5 and the electrode ..." (Underlining added for emphasis)

In other words, the varistor forms an insulating gap that provides no electrical conductive path thereby disconnecting the MOV from the circuitry.

In contrast, as explained above in the context of Ziegler, the thermal fusible layer of our invention is capable of conducting current and adapted to form a high impedance path by separating, at least partially, or cracking, or sputtering, or melting from the surface of the MOV when the temperature of the MOV exceeds a predetermined temperature to form a spark gap electrically connected in series with the MOV to help dissipate voltage surges. In sum, the spark gap of our invention is not the same as the insulative gap of the McLoughlin reference. Moreover, McLoughlin does not disclose the use of an MOV with a GFCI as in our invention.

Amended claim 1 clearly avoids the McLoughlin reference. Dependent claim 4 depends from claim 1 and, therefore, also avoids the McLoughlin reference.

Conclusion

Claims 1 and 4-13 clearly avoid the art of record. Applicant believes that the application is now in condition for allowance and respectfully requests early and favorable reconsideration by the Examiner. If the Examiner believes that additional issues may be resolved by a telephone interview, the Examiner is respectfully requested to telephone the undersigned attorney.

The Commissioner is hereby authorized to charge any additional fees which may be required for this Amendment, or credit any overpayment to Deposit Account No. 12-1185 of Leviton Manufacturing Co., Inc.

A one-month extension of time is being submitted along with this Amendment to make this Amendment timely filed. The Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 12-1185 of Leviton Manufacturing Co., Inc.

Respectfully submitted,

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